

Charting the future for mobile handsets

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Continuing improvements in wireless networks are shifting mobile handsets from mainly voice-centric to data-centric devices. The market has paid increasing attention to the most popular handset features and supported services, and the role each will play in the next-generation mobile handset market.

From worldwide handset unit sales in 2002 of 402.5m and estimates of 465m for 2003, Arc Group believes that growth is set to continue for the next five years, rising to 689m by 2008.

New features and capabilities will ostensibly drive the handset market, but phones will also increasingly support and exploit the potential of next-generation data networks, such as GPRS and 3G, most notably turning round the fortunes of WAP services.

Consequently handsets currently being manufactured are incorporating a variety of features, from Internet access and MMS capability to colour screens, Java and integrated cameras. In addition, some 3G handsets are supplied with streaming video capability and even a second camera.

The onset of multimedia messaging, in tandem with colour screens, pushed the mass-market arrival of camera handsets in 2002, changing the face of the messaging market. There's massive potential for integrated camera phones - Arc estimates that 130m will be sold in 2005 - with 3G providing a huge boost to imaging devices.

In 2008, 210m integrated camera phones (about 30% of the total of handset unit sales) will be sold worldwide, with many also capable of mobile video. Indeed, video download and video messaging are proving popular in some markets, with deployment of video streaming complementing the download service. Video telephony is still touted as one of the few true differentiators for 3G networks.

Other advances in handset features surround those with music and media capabilities. Polyphonic sound is starting to become a common feature and, in the medium term, a larger number of phones will incorporate MP3 storage and playback. As 3G networks reach greater penetration, downloading music files to the handset and their transfer to different devices through Bluetooth, or eventually wireless LAN, will become popular, as will high-quality audio streaming.

The integration of analogue FM radio has appeared on some handset models, but it's the potential for digital audio broadcasting that could be of greatest significance. This would enable users to not only receive audio but also watch broadcast video or terrestrial digital TV.

While the growth in data networks is shaping future handsets, the anticipated widespread adoption of Bluetooth will help drive the early markets for gaming, music and imaging, with possible extension to wireless POS, location-based services and vending. Arc forecasts strong growth in Bluetooth handsets, with more than 435m being sold in 2008, fuelling the expected worldwide rise in connected consumer devices. Compared to Bluetooth, the incorporation of wireless LAN technology into the handset isn't expected to reach significant levels until well after 2006, but is an area of extensive exploration.

While technology has improved significantly to handle many of these added features, future mobile handsets will need to incorporate more powerful processors, greater memory components, enhanced displays and increased battery longevity to cope effectively. In addition, the industry faces several challenges, ranging from consumer cynicism and pricing to network interoperability and roaming issues. But if these are addressed and the market segmented appropriately, then future mobile handsets are certain to be integral to consumers' adoption of communication and multimedia services.

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